

**To:** dave.mccarthy@copperenv.com[dave.mccarthy@copperenv.com]  
**Cc:** Way, Steven[way.steven@epa.gov]  
**From:** Christner, Jan  
**Sent:** Mon 10/12/2015 10:40:55 PM  
**Subject:** Gold King Data  
Gold King Mine Discharge Water Quality10-10-2015.xlsx  
Sonde Data Summary.xlsx  
SummaryReport\_101015\_CC20added.pdf

Hi, Dave.

Steve Way asked me to send you chemistry and flow data from Gold King.

Attached are two Excel files.

**Gold King Mine Discharge Water Quality10-10-2015.xlsx** has the Gold King Mine (sample location CC06) data on the GKM Discharge tab, the temporary water treatment results (sample locations TP04, RBEffluent, and GSP1) data on the Ponds Discharge tab, and % removal on the third tab. Ignore the rest.

**Sonde Data Summary.xlsx** has a table showing flows and treatment at the site. I think you've been there and understand the lingo, but let me know if not. The "box" is the lime addition container from which flow is pumped to the Red and Bonita ponds or bypassed to Cement Creek or the Gladstone ponds. GSP1 is Gladstone Pond 1 that was constructed in upper Gladstone. It had a temporary liner and was used for solids settling for a period of time. It will be lined this week. The RNB-MMDD tab shows Red and Bonita discharge pH, T, cond, turbidity over time when the ponds were in use. The CC18-MMDD and CC20MMDD tabs are shorter term data in Cement Creek downstream of North Fork. The CC20MMDD sonde will stay in place for the time being. It is located on the downstream (south) side of the main Cement Creek road culvert at Gladstone.

**SummaryReport\_101015\_CC20Added.pdf** summarizes some of the above data. The high flow (774 gpm) on 10/9 is likely the result of measurement error due to a change in the measurement location rather than a suddenly high mine discharge.

I was looking at data recently and it currently appears that we are getting the best treatment when both lime and caustic/Brennfloc are used, likely due to the more consistent pH adjustment than with lime alone in the current configuration.

Let me know if there is any other data that might be helpful and I'll hunt it down if we have it.

Also please let me know if you need additional documentation/direction to perform this work. I thought this was all set up a few weeks ago only to hear that you are waiting on Weston for something. I'll nag the right people if you are waiting on something.

Jan

Jan Christner

Weston Solutions, Inc.

505-269-1925 (cell)

505-797-1154

CONFIDENTIALITY: This email and attachments may contain information which is confidential and proprietary. Disclosure or use of any such confidential or proprietary information without the written permission of Weston Solutions, Inc. is strictly prohibited. If you received this email in error, please notify the sender by return e-mail and delete this email from your system. Thank you.